

United States Courts  
Southern District of Texas  
FILED  
OCT 24 2019  
David J. Bradley, Clerk of Court

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION

Pebble Tide LLC,

Plaintiff,

v.

Amercrest Industries LLC,

Defendant.

Case No. 4:19-cv-03906-ASH

Patent Case

Jury Trial Demanded

PEBBLE TIDE'S OPPOSITION TO AMCREST'S MOTION TO DISMISS

Dated: October 23, 2019

Isaac Rabicoff  
RABICOFF LAW LLC  
73 W Monroe St  
Chicago, IL 60603  
773-669-4590  
isaac@rabilaw.com

Counsel for Plaintiff  
Pebble Tide LLC

## TABLE OF CONTENTS

1.	STAGE AND NATURE OF THE PROCEEDINGS .....	1
2.	SUMMARY OF THE ARGUMENT .....	1
3.	LEGAL STANDARD FOR MOTIONS TO DISMISS .....	1
4.	STATEMENT OF FACTS .....	2
4.1	Overview of the Patents-in-Suit.....	2
4.2	Claims of the Patents-in-Suit .....	2
4.3	Widespread incompatibility between wireless devices and corresponding output devices plagued the prior art.....	3
4.4	The Specification demonstrates how inventive features are implemented with limiting detail, including how pervasive mobile devices— <i>regardless</i> of hardware limitations—output digital content to <i>any</i> output devices.....	4
5.	PEBBLE TIDE’S CLAIMS PASS BOTH PRONGS OF <i>ALICE</i> , MAKING THEM PATENT ELIGIBLE UNDER SECTION 101 .....	8
5.1	Step One: Pebble Tide’s claims are patent-eligible subject matter.....	9
5.1.1	Amcrest’s reading contorts the elements of the asserted claims, calling them abstract only by describing them at a high level of abstraction.....	9
5.1.2	The claims describe—with <i>limiting detail</i> —specific improvements to pervasive mobile devices by allowing these pervasive devices— <i>regardless</i> of hardware limitations—to output digital content to <i>any</i> output devices.....	13
5.2	<i>Alice</i> Step Two: Pebble Tide’s claims recite an inventive concept. ....	14
5.2.1	The pervasive output process, a key inventive concept, is captured in the claims and described in the specification. ....	14
5.2.2	<i>Berkheimer</i> and <i>Cellspin</i> prohibit dismissal under Section 101 here, given the factual dispute over the unconventionality of the claimed techniques of pervasive output. ....	17
5.2.3	The asserted claims closely resemble the claims in <i>Cellspin</i> , which the Federal Circuit found to embody an inventive arrangement of elements.....	19
5.2.4	The asserted claims also closely resemble the claims <i>Amdocs</i> , which the Federal Circuit found to embody inventive features. ....	21
6.	MANY TERMS IN THE ASSERTED CLAIMS REQUIRE CLAIM CONSTRUCTION TO RESOLVE THE § 101 ISSUES: AMCREST’S DEMAND FOR DISMISSAL NOW IS PREMATURE. ....	23
7.	AMCREST HAD ACTUAL KNOWLEDGE OF INFRINGEMENT ALLEGED IN THE COMPLAINT, MAKING IT LIABLE FOR INDIRECT INFRINGEMENT .....	23
8.	CONCLUSION .....	24

## TABLE OF AUTHORITIES

Cases

<i>Aatrix Software, Inc. v. Green Shades Software, Inc.</i> , 882 F.3d 1121 (Fed. Cir. 2018) .....	18
<i>Alice Corp. v. CLS Bank Int'l</i> , 134 S. Ct. 2347 (2014) .....	8
<i>Amdocs (Israel) Ltd. v. Openet Telecom, Inc.</i> , 841 F.3d 1288 (Fed. Cir. 2016) .....	22
<i>Ashcroft v. Iqbal</i> , 556 U.S. 662 (2009) .....	2
<i>BASCOM Global Internet Services, Inc. v. AT&amp;T Mobility LLC</i> , 827 F.3d 1341 (Fed. Cir. 2016) .....	16
<i>Bell Atlantic Corp. v. Twombly</i> , 550 U.S. 544 (2007) .....	1, 2
<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018) .....	17, 18
<i>Cellspin Soft, Inc. v. Fitbit, Inc.</i> , 927 F.3d 1306 (Fed. Cir. 2019) .....	18, 19
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981) .....	12
<i>Elec. Power Grp., LLC v. Alstom S.A.</i> , 830 F.3d 1350, 1353 (Fed. Cir. 2016) .....	12
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed. Cir. 2016) .....	12
<i>In re TLI Commc'ns LLC Patent Litig.</i> , 823 F.3d 607 (Fed. Cir. 2016) .....	13
<i>Internet Patents Corp. v. Active Network, Inc.</i> , 790 F.3d 1343 (Fed. Cir. 2015) .....	12
<i>Mayo Collaborative Services v. Prometheus Laboratories, Inc.</i> , 132 S. Ct. 1289 (2012) .....	8
<i>Microsoft Corp. v. i4i Ltd. Partnership</i> , 131 S. Ct. 2238 (2011) .....	9

<i>Ultramercial, Inc. v. Hulu, LLC</i> , 772 F.3d 709 (Fed. Cir. 2014) .....	8
---------------------------------------------------------------------------------	---

**Statutes**

35 U.S.C. § 101 .....	8
-----------------------	---

**1. STAGE AND NATURE OF THE PROCEEDINGS**

Pebble Tide LLC (“Pebble Tide”) sued Amcrest Industries LLC (“Amcrest”) for infringing US Patent Nos. 10,261,739 (the “’739 patent”) and 10,303,411 (the “’411 patent”; the ’739 and ’411 patents are collectively the “Patents-in-Suit”) on May 28, 2019. D.I. 1 (“Complaint”). Three months later, Amcrest moved to dismiss based on § 101. D.I. 15. Pebble Tide responded by amending pleadings, incorporating an expert’s declaration (“Chang Declaration”) demonstrating patent eligibility under § 101. D.I. 16 (“Amended Complaint”).

Pebble Tide now responds in opposition to Amcrest’s Renewed Motion to Dismiss. D.I. 22 (“Amcrest’s Motion”). Additionally, the parties jointly requested to transfer this matter to the Southern District of Texas, and this case was transferred accordingly on October 9, 2019. D.I. 27.

**2. SUMMARY OF THE ARGUMENT**

When evaluating Amcrest’s Motion, this Court should consider these key points:

- The claims describe—with limiting detail—specific improvements to pervasive mobile devices by allowing these pervasive devices—regardless of hardware limitations—to output digital content to any output devices;
- The pervasive output process, a key inventive concept, is captured in the claims and described in the specification, and closely resembles the claims found to capture inventive concepts in *Cellspin* and *Amdocs*; and
- Amcrest had actual knowledge of infringement alleged in the complaint, making it liable for indirect infringement.

Amcrest’s Motion should be denied.

**3. LEGAL STANDARD FOR MOTIONS TO DISMISS**

A motion to dismiss can succeed only when a complaint fails to state a plausible claim for relief, even where all well-pleaded facts are accepted as true and viewed in the light most favorable to the plaintiff. *See Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007). “A

claim has facial plausibility when the pleaded factual content allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009).

And the Supreme Court instructs that this plausibility requirement is not akin to a “probability requirement at the pleading stage; it simply calls for enough fact[s] to raise a reasonable expectation that discovery will reveal” that the defendant is liable for the alleged misconduct. *Twombly*, 550 U.S. at 556.

#### **4. STATEMENT OF FACTS**

##### **4.1 Overview of the Patents-in-Suit**

The Patents-in-Suit provide technical solutions directed to “pervasive output”, which creates a “pervasive mobile computing” experience for users. These pervasive devices may, regardless of processing power, display screen size, or memory space, seamlessly—without compatibility issues—output digital content anywhere to any output device. *See* ’739 patent, 1:18-23.

Pervasive output—as described in the specification and captured in the claims—goes far beyond mere output of digital content from a desktop computer, as shown in the following sections. *See* D.I. 16-5 (“Chang Declaration”), ¶¶ 18-20.

And the Patents-in-Suit share the priority date of U.S. Provisional Application 60/252,682, filed November 20, 2000. ’739 patent; ’411 patent.

##### **4.2 Claims of the Patents-in-Suit**

Claim 1 of the ’739 patent and Claim 1 of the ’411 patent are exemplary asserted claims in this case. The discussion below will primarily address claim 1 of the ’739 patent.

#### **4.3 Widespread incompatibility between wireless devices and corresponding output devices plagued the prior art.**

The increasing power and number of wireless devices exacerbated the problem of widespread incompatibility between wireless devices and corresponding output devices. *See, e.g.,* '739 patent, 1:53-63. Prior art output devices could only receive input data from devices that were of the proper type and format for that specific output device. *Id.*, 2:37-47. Prior art output devices also required specific driver software that had to be installed on wireless devices to allow for communication between the wireless devices and corresponding output devices. *Id.*, 2:26-37; *see also id.*, 2:50-58; *see also* Chang Declaration, ¶¶ 21-25, 28-29.

Requiring installation of device drivers took users significant time, discouraging or even preventing less sophisticated users from using the technology. '739 patent, 2:66-3:16. The complexity and inconvenience of installing prior art output device drivers was most acute for mobile device users—precisely the class of users addressed by the claimed inventions in the Patents-in-Suit. *Id.*, 3:32-44; *see also* Chang Declaration, ¶¶ 21-25, 28-29.

Prior art mobile devices lacked the memory space and processing power, making it difficult or impossible to install and run the output device software needed to communicate with these devices. '739 patent, 3:45-62 (“Slow processing speed and limited power supply create difficulties driving an output device. For example, processing or converting a digital document into output data by a small mobile information apparatus may be so slow that it is not suitable for productive output. Heavy processing may also drain or consume power or battery resources.”); *see also* Chang Declaration, ¶¶ 26-27.

The small display sizes of mobile devices made viewing complex documents difficult, and prior art methods downsized the quality of the documents or made only a few lines of text or images visible. '739 patent, 3:63-4:16 (“[S]ome small mobile devices with limited display

screens . . . may in some cases be limited to display only a few lines of text. Browsing the Internet with such devices can be a disappointing experience.”); *see also id.*, 2:9-10; *see also* Chang Declaration, ¶¶ 26-27.

Mobile phones in the prior art (among other pervasive devices) also lacked any platform to directly output digital content without syncing with or otherwise relying upon a stationary desktop computer. *See, e.g.*, 1:60-63 (“People need to output directly and conveniently from their pervasive information apparatus [e.g. a mobile phone], without depending on synchronizing with a stationary computer (e.g., desktop personal computer) for printing, as an example.”)

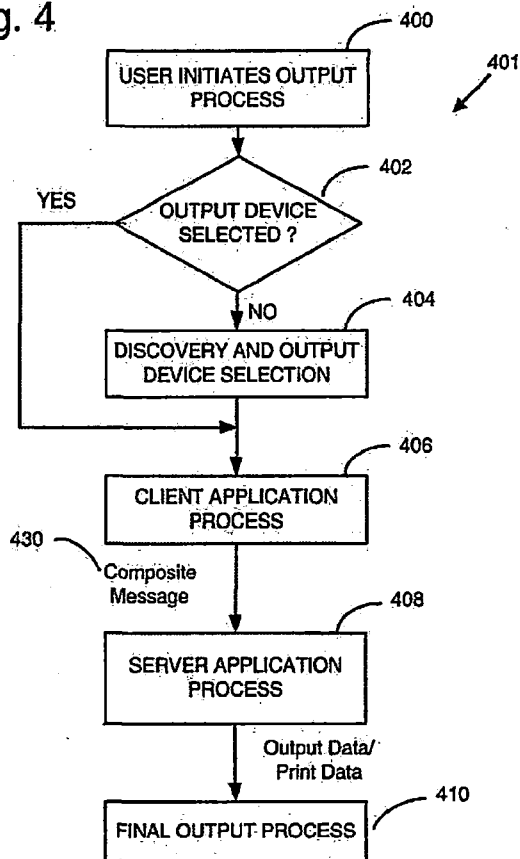
**4.4 The Specification demonstrates how inventive features are implemented with limiting detail, including how pervasive mobile devices—*regardless* of hardware limitations—output digital content to *any* output devices.**

The claimed pervasive output process is described with specificity in the specification.

Figure 4 illustrates an implementation of this process:



Fig. 4



Each step involved in pervasive output is captured in key claim terms (as shown further below), and described with detail:

Table 1	
The pervasive output process and key components	The process and components are captured in the claims
<p>“Pervasive output process 401 allows an <b>information apparatus 100</b> to output digital content or document in its original form to an <b>output device 106</b> regardless of processing power, display screen size, or memory space of <b>information apparatus 100</b>.” (’739 patent, 20:66-21:3.)</p>	<p>The bolded terms on the left all refer to processes, components, and data types that are expressly claimed. For example, <b>client application 102</b> and <b>service application 112</b> are both embodiments of “client software” and “server software”, respectively. <i>See, e.g., id.</i>, claim 1.</p>

<p>The operative parts of this process are:</p> <p><b>“A client application 102, in an information apparatus 100, obtaining objects; with at least one object including a document object and another object including an output device object (or printer object in the case of a printer);</b></p> <p>A client application 102 transmitting objects to a server application 112;</p> <p>A server application 112 obtaining and processing the document object and converting it into <b>output data</b>, reflecting at least in part a relationship to said output device object;</p> <p>A server application 112 transmitting output data to the <b>information apparatus 100</b> including a client application 102;</p> <p>The <b>information apparatus 100</b> including a client application 102 transmitting <b>output data</b> to an <b>output device 106</b>;</p> <p>An <b>output device 106</b> generating output with the <b>output data.</b>” (<i>Id.</i>, 21:5-22.)</p>	<p><b>Information apparatus 100, device object, and output device 106</b> are also expressly claimed, among others. <i>See, e.g., id.</i>, claim 1.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------

*See also* Chang Declaration, ¶¶ 36-37, 46-49 (describing, with specification support, the key inventive components of the pervasive output process).

The specification further describes the inventive aspects of “objects”, which acts like both a container for pervasive output data and a functional software component:

<p>How objects act as a container for pervasive output data and a functional software component</p>
<p>An object encapsulates data, self-referencing attributes, and instructions for operating upon its data:</p> <p>“An object may refer to a software and data entity, which may reside in different hardware environments or platforms or applications. An object may encapsulate within itself both data</p>

and attributes describing the object, as well as instructions for operating that data.” ’739 patent, 5:20-24.

How an object can encapsulate self-referencing attributes, pointers to other objects, and various combinations thereof:

“An object may also contain in one of its fields or attributes a reference or pointer to another object, or a reference or pointer to data and or content. (The terms reference and pointer may be used interchangeably herein.) A reference to an object or any entity or content may include one or more, 40 or a combination of, pointers, identifiers, names, paths, addresses or any descriptions relating to a location where an object, data, or content can be found. Examples of reference may include universal resource identifier scheme (URI), uniform resource locator (URL), IP address, file names, 45 directory pointers, software object and component pointers, and run-time address, among others.” *Id.*, 5:36-47.

How “device objects” identify output devices, are stored in output device memory, and communicate device information to information apparatuses:

“An output device object may contain one or more attributes that may identify and describe, for example, the capabilities and functionalities of a particular output device such as a printer. An output device object may be stored in the memory component of an output device. As described below in greater detail, an information apparatus requesting output service may communicate with an output device. During such local service negotiation, at least a partial output device object may be uploaded to the information apparatus from the output device. By obtaining the output device object (or printer object in the case of a printer), the information apparatus may learn about the capability, compatibility, identification, and service provided by the output device.” (*Id.*, 6:6-20; *see also id.*, 6:21-7:3, describing the extensive set of fields and attribute descriptions contained in output device objects.)

How a “job object” contains attributes and information about an output job, including default information derived from an information apparatus:

“A job object may contain attributes and information that describe an output job. A user may provide some or all of these attributes, preferences and or information about the output job consciously by, for example, specifying his/her preference through a GUI or through defaults in his/her information apparatus. Alternatively or in combination, a job object may be obtained without active user intervention. In one instance, default parameters may be provided, obtained, negotiated or calculated without user knowledge.”

*See also* Chang Declaration, ¶¶ 38-49 (demonstrating how multiple types of claimed objects are employed in an inventive manner in the pervasive output process).

**5. PEBBLE TIDE’S CLAIMS PASS BOTH PRONGS OF *ALICE*, MAKING THEM PATENT ELIGIBLE UNDER SECTION 101**

Pebble Tide’s claims are patent eligible, because they satisfy the *Alice* test for patent eligibility under Section 101. Patent-eligible subject matter includes “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101 (1952). The judicially recognized exceptions from this provision are for “[l]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). The Supreme Court has “set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Id.* at 2355.

First, the court must “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” (“*Alice* Step One”). *Id.* Otherwise, “the claims pass muster under § 101.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714 (Fed. Cir. 2014). The relevant inquiry here is “whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an “abstract idea” for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335-36 (Fed. Cir. 2016).

Second, only if the claims at issue are directed to one of those patent-ineligible concepts, then the court must “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application” (“*Alice* Step Two”). *Alice*, 134 S. Ct. at 2355 (quoting *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289, 1297 (2012)). This step asks whether the claims add an “inventive concept” that is “sufficient to ensure that the

patent in practice amounts to significantly more than a patent upon the ineligible concept itself.”

*Id.* (internal citations omitted).

Amcrest also bears the burden to prove the invalidity of Pebble Tide’s claims *with clear and convincing evidence*, which it cannot do. *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S. Ct. 2238, 2242 (2011).

## 5.1 Step One: Pebble Tide’s claims are patent-eligible subject matter.

### 5.1.1 Amcrest’s reading contorts the elements of the asserted claims, calling them abstract only by describing them at a high level of abstraction.

Amcrest strips the claims of all limiting detail and inventive concepts by reducing them to nothing more than “wirelessly outputting data from one device to another.” *See, e.g.*, Motion, 3. Comparing Amcrest’s abstracted summaries of the elements with those actual elements dispels the confusion:

Table 2: Claim 1 (the ’411 patent) is not abstract	
Amcrest’s summary (Motion, 11)	Claim 1, ’411 patent
[omitted]	(1.0) A method for outputting digital content, the method comprising:
[omitted]	(1.1) establishing, via at least one wireless communication module included in an information apparatus, a wireless communication connection with one or more servers over a network that includes the Internet, the one or more servers being separate and distinct devices from the information apparatus;
[omitted]	(1.2) transmitting, via the at least one wireless communication module included in the information apparatus, a device object that includes device information related to the information apparatus, from the information apparatus to the one or more

	servers over the established wireless communication connection;
“capturing data on an information apparatus”	(1.3) capturing, using a digital camera included in the information apparatus, digital content;
[omitted]	(1.4) providing, via the at least one wireless communication module of the information apparatus, the digital content that is captured by the digital camera of the information apparatus, from the information apparatus to the one or more servers, wherein the one or more servers include at least one network communication interface, memory or storage for storing at least part of the digital content received from the information apparatus, and server software executable at the one or more servers; and
[omitted]	(1.5) wherein upon execution of the server software, the method further comprises:  receiving, by the server software at the one or more servers and via the at least one network communication interface, at least part of the digital content from the information apparatus;
“storing that data at a server”	(1.6) storing, <b>by the server software at the one or more servers</b> , the at least part of the digital content, <b>received by the server software</b> , in the memory or storage of the one or more servers;
“allowing authenticated users to access the data”	(1.7) <b>receiving, by the server software at the one or more servers</b> , security information or authentication information from a client device for enabling the client device to access the at least part of the digital content that is stored by the server software in the memory or storage of the one or more servers, <b>the at least part of the digital content stored in the memory or storage of the one or more servers being captured by the digital camera of the information apparatus and received from the information apparatus, and the client device being a separate and distinct</b>

	<b>device from the one or more servers and from the information apparatus;</b>
“converting that data as necessary, and”	(1.8) generating, by the server software at the one or more servers, output data for providing to the client device, the output data is related to at least part of the digital content received by the one or more servers from the information apparatus, and the generating of the output data is related, at least in part, to at least a portion of the device object received by the one or more servers from the information apparatus, and the generating of the output data is subsequent to having received the security information or the authentication information from the client device for enabling the client device to access the at least part of the digital content stored in the memory or storage of the one or more servers, the client device being a separate and distinct device from the information apparatus and from the one or more servers; and
“wirelessly outputting the data via an output device”	providing, by the server software and via the at least one network communication interface of the one or more servers, at least part of the output data from the one or more servers to the client device for outputting or playing at least part of the digital content, that was captured by the digital camera of the information apparatus, at an output device associated with the client device.

Amcrest’s summary of claim 1 (Patents-in-Suit) strips out the very limitations that

*implement* the claimed invention and provide *inventive features*, including:

- How the information apparatus, through its wireless communications module, establishes an internet connection with one more separate and distinct servers (Element 1.1; Amcrest completely omits this element from its summary);
- How the information apparatus, through its wireless communications module, transmits a device object—containing device information about itself—to the servers (Element 1.2: again, completely omitted from Amcrest summary);
- Beyond merely “capturing data”, the information apparatus uses an embedded digital camera to capture digital content (Element 1.3);

- How the server software receives at least part of the digital content from the information apparatus through a network communication interface (Elements 1.4 and 1.5: omitted in Amcrest summary); and
- Beyond merely “storing that data at a server”, the particularly claimed server software receives at least part of the digital content in the memory or storage of the servers (Element 1.6).

Amcrest’s reading of these claims therefore dilute and depart from the actual language, an approach to Section 101 analysis prohibited by the Federal Circuit. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) (“[D]escribing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to §101 swallow the rule.”); *see also Diamond v. Diehr*, 450 U.S. 175, 189 n.12 (1981) (cautioning that overgeneralizing claims, “if carried to its extreme, make[s] all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious”).

*Alice* Step One must be meaningful: this step often ends the inquiry. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *see also Enfish*, 822 F.3d at 1335; *see also Alice*, 134 S. Ct. at 2354 (noting that “we tread carefully in construing this exclusionary principle [of laws of nature, natural phenomena, and abstract ideas] lest it swallow all of patent law”). Singling out individual steps to find a patent-ineligible concept does not demonstrate that the claims are abstract. *Enfish*, 822 F.3d at 1335.

Instead, a court must consider claims in light of the specification and find an abstract idea only when “their character *as a whole* is directed to excluded subject matter.” *See id.* (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)) (emphasis added). When understood this way, none of the claims are abstract.



**5.1.2 The claims describe—with *limiting detail*—specific improvements to pervasive mobile devices by allowing these pervasive devices—*regardless of hardware limitations*—to output digital content to *any* output devices.**

The parties apparently agree over what the claimed technological improvement is.

Amcrest acknowledges that “the claimed advance of the Asserted Patents is a wireless universal output system that overcomes a variety of known technical limitations.” Motion, 19. Amcrest further admits that “the Asserted Patents identify various hardware and software compatibility issues, data formatting restrictions, and device processing power and memory limitations as the primary problems inhibiting the ability to output information between devices.” Motion, 12.

And yet Amcrest ignores swaths of patent disclosure when it asserts that the claims are “not directed to any specific means that can overcome these purported issues.” And it accuses the claims here of abstractness only by gutting the inventive limitations that implement the pervasive output process. *See* Table 2, § 5.1.1, above (Amcrest threadbare summaries of claim 1 versus the actual claim language). The claims describe particular techniques—with limiting detail—to solve the problem of widespread incompatibility between wireless devices and corresponding output devices the prior art. *See* § 4.3. The specification shows how to implement those claimed techniques that allow pervasive output from mobile devices—regardless of hardware limitations—to output devices, including step-by-step instruction over the mechanics of the pervasive output process. *See* § 4.4; *see also* Chang Declaration, ¶¶ 36-37, 46-49.

Since the improvements to pervasive output technology are captured in the claims and implemented in the specification with *limiting detail*—detail unaddressed by Amcrest—this case steers clear of the “purely functional” and poorly described claims of *TLI*, among others. *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016).

And the specification technically describes the operation of the claims' key components, such as "client software", "server software", "object", and "device object", among others, and *how* they collectively enable the pervasive output process. *See* § 4.4. Amcrest simply ignores these passages when it suggests that the "client application" is described as nothing more than "executable 'software and data'" operating in an "information apparatus" and "run[ning] on different operating systems or platforms." Motion, 15 (citations omitted). What's worse, Amcrest asserts that "the only technical description" of "server application" is that it is "comprised of 'software and data.'" Motion, 15.

Amcrest disregards the implementing passages that explain how these key components, such as the "client application" and "server application" operate *in the context of the pervasive output process*. *See* '739 patent, 21:5-22 (describing how the client and server applications enable pervasive output); *see also* § 4.4. Nor does it mention the implementation of device and document objects, among others, and how the client and server application employ these object types to seamlessly interface with output devices. *Id.*

Since claim 1 describes specific improvements to pervasive output technology, it is non-abstract and patent eligible at *Alice* Step One.

## **5.2 Alice Step Two: Pebble Tide's claims recite an inventive concept.**

### **5.2.1 The pervasive output process, a key inventive concept, is captured in the claims and described in the specification.**

Even if this Court finds that Pebble Tide's claims are directed to an abstract idea, the claims would still fall within the realm of an inventive concept post-*Alice*.

The inventive concepts of the Patents-in-Suit lie in the *interplay* among its key claimed components, including how the client software within the information apparatus obtains and transmits document and device objects, and how the server software interprets and reformulates

these objects into output data that can be universally accepted by the intended output device, how the information apparatus receives and then outputs this data to the output device, and how this full process is achieved regardless of hardware, display, and compatibility limitations of the client device. *See* Table 1, § 4.4 (showing how the key components interact in an inventive manner to achieve the claimed pervasive output process); *see also* Chang Declaration, ¶¶ 36-37, 46-49. And the specification shows how objects—the specialized data packets moving between the server, information apparatus, and output device—act as a container for pervasive output data and a functional software component. *See* § 4.4 (showing how, among other things, objects encapsulate data, self-referencing attributes, and instructions for operating upon its data); *see also* Chang Declaration, ¶¶ 38-49.

Two inventive processes combine to achieve the pervasive output process:

<b>Table 3: two inventive processes to achieve the pervasive output process</b>	
<p>(1) <i>The Device Object Process</i></p> <p>Generating “<b>output data</b>” from “digital content” based at least in part on the “<b>device object</b>”.</p>	<p>(2) <i>The Job Object Process</i></p> <p>Providing the generated “<b>output data</b>” to the “<b>client device</b>” occurs “<b>subsequent to</b>” the server receives the “<b>job object</b>”.</p>
<p><i>How Device Object Process is captured in the claims.</i></p> <p>This process is achieved by communications between three distinct structures: (1) “establish[ing] a wireless communication connection” between the information apparatus and the server over a network that includes the Internet; (2) “transmitting a <b>device object</b>,”; and (3) “generat[ing], at the one or more servers, <b>output data</b>” (from “digital content” based at least in part on the “device object”) that is based on having</p>	<p><i>How Job Object Process is captured in the claims.</i></p> <p>This happens through the wireless interactions between these distinct structures: (1) “the client software provides, via the one or more wireless communication units of the client device, <b>one or more job objects</b> to the one or more servers over the network, (2) “<b>generates, at the one or more servers, output data for output at the client device</b>”; and (3) “<b>provides, via the at least one network communication interface of the one or more servers, at least part of the output data, from the one or more servers to the client device, for outputting at least part of the digital</b></p>

<p>“establish[ed]” the “wireless communication connection” between the information apparatus and the server in (1). <i>See</i> ’739 patent, claim 1.</p>	<p>content received from the information apparatus”. <i>Id.</i></p>
<p><i>What the combination of the Job and Device Object Processes achieve, rendering the claims unconventional over the prior art.</i></p> <p>(1) Solving the widespread incompatibility between information apparatuses (e.g. phones) and output devices (e.g. printers): this is achieved by the server generating output data related to the “<b>device object</b>” (received from the information apparatus), but only <i>after</i> (i.e. “subsequent to”) the server receives security information (i.e. “<b>job object</b>”) that authenticates and identifies the client device. <i>See</i> §§ 4.3, 4.3.</p> <p>(2) Solving the problem of users manually pre-installing device drivers: this is achieved by transmitting from the information apparatus to the server the device object (that includes device information about the information apparatus) and then generating output data related to a portion of this device object. <i>Id.</i></p> <p>(3) Solving the problem of limited memory space, processor power, and display size of client devices: the output data is generated—not at the client device—but at the “one or more servers”, sparing the client device from demands of generating this output data. <i>Id.</i></p>	

Only by viewing each component in isolation—as a freestanding information apparatus, output device, and network communication interface—can Amcrest assert that the Patents-in-Suit claim only generic components running generic functions.

Just as the Patents-in-Suit are not claiming the generic operation of information apparatuses, servers, and output devices, in *Bascom* the plaintiff “d[id] not assert that it invented local computers, ISP servers, networks, network accounts, or filtering . . . Nor d[id] the specification describe those elements as inventive.” *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). Rather, “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Id.* at 1350.

The pervasive output process is captured in the detailed procedure outlined in the claims, spanning numerous limitations, to achieve universal output from an information apparatus (such as a mobile phone) to output devices (such as printers). Like in *BASCOM*, the specification here describes how a “particular arrangement of elements is a technical improvement over prior art.” *Id.*

**5.2.2 *Berkheimer* and *Cellspin* prohibit dismissal under Section 101 here, given the factual dispute over the unconventionality of the claimed techniques of pervasive output.**

The claims describe inventive features that require a factual determination about their unconventionality: “inventive feature[s] . . . to the extent they are captured in the claims, create a factual dispute regarding whether the invention describes well-understood, routine, and conventional activities.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018). Summary judgment—let alone Rule 12(b)(6) dismissal—is “improper” because “whether the claimed invention is well-understood, routine, and conventional is an underlying fact question for which [the defendant] offered no evidence.” *Id.* at 1370.

The Patents-in-Suit claim several inventive features, including particular techniques enabling pervasive output from information apparatuses (such as mobile phones) to output devices (such as printers). *See, e.g.*, §§ 4.4, 5.2.1. These inventive concepts are both claimed and extensively described in the specification. *Id.*

On many occasions, Amcrest provides expert-like opinion about the conventionality of these specifically claimed techniques. For example, without *technical* support (since extrinsic evidence is not permitted at this stage), Amcrest asserts: “the limitation of ‘transmitting . . . a device object that includes device information’ does not confer patentability . . .” Motion, 19. Amcrest weighs in even more categorically about conventionality: “although the stated goal of the Asserted Patents is to provide a wireless universal output system that overcomes a number of

known technical impediments, not a single technical improvement is discussed, much less claimed.” Motion, 18.

Besides stripping out key inventive limitations from its analysis and ignoring the ordered combination of elements that culminates in a pervasive output system, Amcrest opines about conventionality more like an expert over issues of fact than an attorney over issues of law. Nor can Amcrest show that the claimed techniques were conventional in the year 2000. *See* § 4.1.

What’s more, to demonstrate conventionality with *clear and convincing evidence*, Amcrest must go beyond even showing that prior art merely discloses all elements of the claims (which it cannot do):

Mere disclosure of a concept in the prior art does not render it conventional.

“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination. **Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art.** The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.” (*Berkheimer*, 881 F.3d at 1368; emphasis added.)

And the expert declaration, incorporated in the complaint, provides “concrete allegations . . . that individual elements and the claimed combination are not well-understood, routine, or conventional activity.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018); *see also* Chang Declaration, ¶¶ 36-49.

And the case for dismissing the Motion is even stronger here than in *Cellspin*, where the specification never identified the claimed structure as unconventional: the inventive pervasive output process is captured in the claims and *explicitly* considered unconventional in the specification—both are alleged in the complaint at length. *See Cellspin Soft, Inc. v. Fitbit, Inc.*, 2019 U.S. App. LEXIS 18853, 18876 (Fed. Cir. 2019). (“As long as what makes the claims

inventive is recited by the claims, the specification need not expressly list all the reasons why this claimed structure is unconventional.”); *see also* Chang Declaration, ¶¶ 36-49; *see also* § 4.4.

This dilemma demonstrates the peril of rendering a final decision on conventionality at the pleadings stage. Dismissal in the face of genuine factual disputes over unconventional inventive features is therefore improper. *Berkheimer*, 881 F.3d 1360 at 1370.

**5.2.3 The asserted claims closely resemble the claims in *Cellspin*, which the Federal Circuit found to embody an inventive arrangement of elements.**

The “two-step, two-device structure” of *Cellspin*—following *BASCOM*’s reasoning to identify an inventive arrangement of seemingly conventional elements—closely resembles the claims here. *See Cellspin*, 2019 U.S. App. LEXIS at 18879 (observing that *BASCOM* was “particularly instructive on this point”); *see also id.* at 18876 (“*Cellspin* made specific, plausible factual allegations about why aspects of its claimed inventions were not conventional, e.g., **its two-step, two-device structure requiring a connection before data is transmitted.** The district court erred by not accepting those allegations as true.”; emphasis added).

Pebble Tide has likewise specifically alleged that the following elements capture one or more inventive concepts—well-defined in the specification—by enabling the pervasive output of digital content:

Table 4: Steps of the three distinct structures of the pervasive output process
Steps of the information-apparatus structure ( <i>see, e.g.,</i> ’739 patent, claim 1)
(1) an information apparatus that includes a digital capturing device for capturing digital content, at least one wireless communication module for wireless communication, and at least one processor, the at least one processor directs the at least one wireless communication module to;



- (1.1) transmit, over the wireless communication connection, a device object that includes device information related to the information apparatus, from the information apparatus to the one or more servers; and
- (1.2) provide, over the wireless communication connection, the digital content captured by the digital capturing device of the information apparatus, from the information apparatus to the one or more servers;

#### Steps of the server-side structure

- (2) wherein the server software further:
  - (2.1) one or more processors for executing at least part of the client software, wherein the client software provides, via the one or more wireless communication units of the client device, one or more job objects to the one or more servers over the network, the one or more job objects including at least one of security information or identification information for accessing the one or more servers, and the one or more job objects further include subscription information for accessing the one or more servers;
  - (2.2) receives, via the at least one network communication interface, the digital content from the information apparatus;
  - (2.3) generates, at the one or more servers, output data for output at the client device, the output data is related to at least part of the digital content received by the one or more servers from the information apparatus, and the generating of the output data is related, at least partly, to at least a portion of the device object received by the one or more servers from the information apparatus; and
  - (2.4) provides, via the at least one network communication interface of the one or more servers, at least part of the output data, from the one or more servers to the client device, for outputting at least part of the digital content received from the information apparatus, the providing of at least part of the output data is subsequent to the one or more servers having received the one or more job objects from the client software at the client device; and

#### Steps of the client-side structure

- (3) wherein the client software further:
  - (3.1) receives, via the one or more wireless communication units of the client device, at least part of the output data from the one or more servers, and the receiving of the at least part of the output data is subsequent to the client device having



provided the one or more job objects to the one or more servers over the network; and

- (3.2) outputs at least part of the output data, received at the client device, at the output device associated with the client device.

*See also* § 5.2.1, Table 3 (describing these three distinct structures in the context of the *Device Object Process* and *Job Object Process*).

Like the two-device, two-step structure requiring a connection before data transfer in *Cellspin*, the claims here recite three distinct structures (a server, information apparatus, and client device) having at least five steps of interaction—an inventive combination of elements—in order to ultimately transfer the “output data” to a “client device”. The claims here require that a server, before transferring data to the client device, generate output data combining digital content (acquired from the information apparatus) and a “device object” (also acquired from the information apparatus *and* containing device information related to that apparatus) in order to pervasively output this data to the client device. *See* ’739 patent claim 1 (“the client device is a distinct device from the information apparatus and from the one or more servers”); *see also* Chang Declaration, ¶¶ 38-49; *see also* § 4.4 above.

This Court should reach the same conclusion as *Cellspin*, since the claimed five-step, three-device structure—elements combined in an unconventional manner—captures inventive concepts that render it patent eligible.

**5.2.4 The asserted claims also closely resemble the claims *Amdocs*, which the Federal Circuit found to embody inventive features.**

Both sets of claims—here and in *Amdocs*—involve improving network computing functionality when moving data between network devices. Just as the inventiveness of *Amdoc*’s distributed architecture to enhance data flows lied in the *interaction* of network devices organized in a distributed manner, the inventiveness in the claimed pervasive output process lies

in the *interaction* among the information apparatus, server, and output device, including how the client software within the information apparatus obtains and transmits document and device objects, and how the server software interprets and reformulates these objects into output data that can be universally accepted by the intended output device, and how the information apparatus receives and then outputs this data to the output device. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1301 (Fed. Cir. 2016).; *see also* Table 1, § 4.4.

Given the unconventional interaction between network devices claimed in *Amdocs*, the Federal Circuit found this representative claim as inventive. This is despite the use of “arguably generic components, including network devices and ‘gatherers’ which ‘gather’ information.” *Amdocs*, 841 F.3d at 1300.

Amdoc's inventive claim
<p>“A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:</p> <p>computer code for receiving from a first source a first network accounting record;</p> <p>computer code for correlating the first network accounting record with accounting information available from a second source; and</p> <p>computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.” (<i>Id.</i> at 1299.)</p>

And while *Amdoc*'s specification details how the data “gathers” provide unconventional data enhancement features, so too does the specification here show how data objects—the specialized data packets moving between the server, information apparatus, and output device—act as an unconventional container for pervasive output data and a functional software component. *See id.* at 1301; *see also* § 4.4 (showing how, among other things, objects encapsulate data, self-referencing attributes, and instructions for operating upon its data).

Given the close resemblance of *Amdoc*'s inventive claims with the claims here, and noting that Amcrest has neglected to provide any contrary claim comparison with a Federal Circuit case, this Court should reach the same conclusion as *Amdoc*'s: the claimed pervasive output process is inventive.

**6. MANY TERMS IN THE ASSERTED CLAIMS REQUIRE CLAIM CONSTRUCTION TO RESOLVE THE § 101 ISSUES: AMCREST'S DEMAND FOR DISMISSAL NOW IS PREMATURE.**

Given the parties' dispute over the unconventionality and meaning of claim terms such as "output data", "object", "device object", "job object", "server software", and "client software" (*see, e.g.*, '411 patent, claim 1), dismissal now is inappropriate. *See* Chang Declaration, ¶¶ 38-45 (proposing claim term definitions, with specification support, that reveals the inventive aspects of these terms within the context of the pervasive output process).

Claim construction is therefore needed to resolve the issue of conventionality, at least for the these identified claim terms. Without it, the ultimate issue of subject matter eligibility under Section 101 cannot be properly determined.

**7. AMCREST HAD ACTUAL KNOWLEDGE OF INFRINGEMENT ALLEGED IN THE COMPLAINT, MAKING IT LIABLE FOR INDIRECT INFRINGEMENT**

The filing of the original Complaint, with accompanying chart, provided detailed factual allegations as to the nature of Amcrest infringement of the Patents-in-Suit.<sup>1</sup> *See* Amended Complaint, ¶¶ 17-20, 27-30. Unsurprisingly, Amcrest never cites to the complaint paragraphs that specifically identify *how* Amcrest was informed about its infringing conduct: paragraphs 17 and 27 were not cited or considered in its Motion. *See* Motion, 24-25 (Amcrest fails to consider these pertinent paragraphs); *see also* Amended Complaint, ¶¶ 17, 27.

---

<sup>1</sup> The original Complaint asserted the '739 patent, but Amcrest chose claim 1 of the '411 patent as "representative" of *all* asserted claims including those of the '739 patent; it is therefore not conceivable that it lacked actual knowledge of both now-asserted Patents-in-Suit. *See* Motion, 6.

Since Amcrest was informed about the infringing conduct of its customers, it is liable for indirect infringement.

**8. CONCLUSION**

Pebble Tide therefore requests that this Court deny Amcrest's Motion to Dismiss.

Dated: October 23, 2019

Respectfully submitted,

/s/ Isaac Rabicoff  
Isaac Rabicoff  
**RABICOFF LAW LLC**  
73 W Monroe St  
Chicago, IL 60603  
773-669-4590  
isaac@rabilaw.com

Counsel for Plaintiff  
Pebble Tide LLC

**CERTIFICATE OF SERVICE**

The undersigned certifies that a copy of the foregoing document was served on all parties who have appeared in this case on October 23, 2019, via email to counsel of record.

/s/ Isaac Rabicoff  
Isaac Rabicoff